REMARKS

Status of the Claims

Currently Amended: Claims 1, 14, and 22

Original: Claims 2-13, 14-21, and 23-32

Claims 1-32 are pending in the present application. Applicant has amended claims 1, 14, and 22 to more clearly define the present invention.

Objections to the Specification

The Examiner has objected to the use of various trademarks throughout the specification. Applicant has amended the specification to capitalize trademarks wherever they appear and to be accompanied by the generic terminology. Applicant respectfully submits the specification as amended overcomes the Examiner's objections.

Objections to the Drawings

The Examiner has objected to the drawings under 37 C.F.R. § 1.84(5) because they do not include reference signs mentioned in the description and because they include reference signs not mentioned in the description. Applicant has submitted with this response proposed drawing corrections to figure 4 and figures 5A and 5B to address the concerns raised by the Examiner. Applicant respectfully submits the proposed drawing corrections overcome the Examiner's objections.

Objections to the Disclosure

The Examiner has objected to the disclosure under 37 C.F.R. § 1.84(5), § 1.121(e), and 37 C.F.R. § 1.81(a,b) due to several informalities. Specifically, the Examiner has stated the specification lacks explicit references to various reference legends in the drawings. Applicant has amended the specification to address the concerns raised by the Examiner. Applicant respectfully submits the specification as amended overcomes the Examiner's objections. Applicant further respectfully submits that no new matter has been added.

Claim Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 1-32 under 35 U.S.C. § 103(a) as being unpatentable over Elliot in view of either Cornwell, Heng, or Kumagai. It is the Examiner's position that Elliot discloses a CAD system in which a user connects via a network to a centralized computer system and databases and that the user views and designs an item via a series of guiding menus for the selection of various forms/components and associated functions of the selected forms/components. It is the Examiner's position that Elliot does not teach evaluating design feasibility, and that Cornwell, Heng, or Kumagai disclose CAD systems that permit a user to modify the design of a product within various design constraints (e.g., size, manufacturability). The Examiner states that it would have been obvious to one of ordinary skill at the time of the invention to modify the CAD system of Elliot to consider and display the feasibility of a design as taught by Cornwell, Heng, or Kumagai.

Applicant has amended claims 1, 14, and 22 to indicate that design feasibility according to the present invention relates to compatibility between the functional modules selected by the user. At each step in the design process, the user's options are limited to functional modules that are compatible with previously selected modules. In view of Applicant's amended claims, Applicant respectfully traverses the rejection of claims 1-32. Applicant respectfully submits that none of the references cited by the Examiner alone or in combination teach or even suggest evaluating design feasibility as it relates to the compatibility of selected functional modules.

Applicant respectfully submits that the references cited by the Examiner, whether related to construction or electronics, teach only evaluation of physical layout to confirm that the components selected by a user will fit in a predefined area. Elliot teaches a computerized system for developing a construction proposal. The user is prompted for "critical information" related to the construction process so that a construction professional can manually evaluate the proposal and submit a bid. Although the user is prompted for information, there is no teaching or even a suggestion, as noted by the Examiner, that any of the user's selections are examined or evaluated for compatibility. More importantly, Elliot specifically states that a construction professional must ultimately determine the feasibility of the project.

Applicant respectfully submits that none of the other references cited by the Examiner teach evaluation of design feasibility and therefore, when combined with Elliot do not teach evaluation of design feasibility. Cornwell teaches a

method for designing and detailing cabinets. The method incorporates design constraints and standards. However, the constraints and standards relate only to physical layout of the cabinets. Multiple passages throughout the Cornwell reference indicate that it is directed only to physical layout. (Col. 1, ll. 51-54: "layout of a room of cabinets"; Col. 2, ll. 64-65: "a method for designing and detailing cabinets to fit within an available space"; Col. 4, ll. 34-44: cabinets can be customized for the job; Col. 8, ll. 38-52: physical constraints related to cabinet placement are considered.) Applicant respectfully submits that Cornwell does not teach or even suggest evaluating design feasibility as it relates to compatibility between functional modules. In fact, because there are no "interoperability" requirements for cabinets, it does not make sense to evaluate them for compatibility.

More importantly, Cornwell teaches, just as Elliot does, that ultimately a professional must determine whether the project is feasible. The term "detailing" in the art refers to a process performed by a cabinetmaker in which the cabinetmaker develops a list of parts, cutting list, costs, etc. Cornwell states in Col. 12, ll. 47- 53 that the invention "... achieves results not achievable by manual procedures, by relegating most of the detailing work to a fully automated computer operation and by displaying designs that can be directly linked to detailing results ...." Applicant respectfully submits that Cornwell teaches away from the present invention by teaching a detailing process that still requires the involvement of a skilled cabinetmaker to evaluate the overall feasibility of the

project. Therefore, Applicant respectfully submits that the combined teachings of Elliot and Cornwell do not teach or even suggest the present invention.

Heng teaches a method for converting an integrated circuit design to a phase-shift compliant mask design. As with the Elliot and Cornwell references, Heng teaches only physical layout. In Col. 6, ll. 41-45, Heng states that the tool uses phase shift design rule checking and layout modification system technology to isolate and resolve phase shift in compliant shapes and layouts with minimized impact on layout density. Applicant respectfully submits that Heng does not teach or even suggest evaluating design feasibility as it relates to compatibility between functional modules of a circuit. Therefore, Applicant respectfully submits that the combined teachings of Elliot and Heng do not teach or even suggest the design feasibility feature of the present invention.

Kumagai teaches a design evaluation method for manufacturability of a circuit board design. To that end, Kumagai teaches evaluating one or more completed designs to identify manufacturing issues. Kumagai is not directed to selecting components for a circuit board design and therefore, does not teach evaluating design feasibility as it relates to compatibility between functional modules that are selected by the circuit board designer. Therefore, Applicant respectfully submits that the combined teachings of Elliot and Kumagai do not teach or even suggest the design feasibility feature of the present invention.

In regard to claims 1, 3, 4, 6-14, 16-25, and 27-32, Applicant respectfully submits that the CAD system of Elliot modified to consider and display feasibility of a design as taught by Cornwell, Heng, or Kumagai results only in a system in

which requirements related to physical layout of components is evaluated. Applicant respectfully submits the combination of references does not result in a system that evaluates design feasibility as it relates to compatibility of functional modules as taught by Applicant.

In regard to the attributes of claims 4, 19, and 24, it is the Examiner's position that the attributes relate to the manufacturing process for the designed item. Applicant respectfully submits however, that in the Elliot and Cornwell references, attributes related to the "manufacturing process" are ultimately determined by a professional rather than in the automated systems that are disclosed. In Heng and Kumagai, "manufacturability" is analyzed only to the extent it relates to the physical layout of electronic components. Lead times and related attributes are not disclosed or even suggested. Applicant respectfully submits therefore the combination of references does not result in or suggest a system that evaluates the attributes recited in claims 4, 19, or 24.

In regard to claims 2, 5, 15 and 26, it is the Examiner's position Elliot and Kumagai use the same basic method of design except that Kumagai is directed to designing circuit boards. The Examiner further states that it would be obvious to one of ordinary skill to modify the CAD system of Elliot to use design circuit boards as taught by Kumagai by merely changing the data of the forms and components stored in the databases. Applicant respectfully submits that because Elliot is directed only to entering data to be evaluated ultimately by a professional who determines the feasibility of a project, such a modification does not result in Applicant's invention. Neither reference discloses or even suggests

evaluating the compatibility of functional modules that are selected for a design. Applicant respectfully submits therefore, that the references cannot be combined to support the present rejections.

Applicant has amended claims 1, 14, and 22 to indicate more clearly that design feasibility according to the present invention relates to compatibility between the functional modules selected by the user. Applicant respectfully submits that the present application is now in condition for allowance and respectfully requests such action.

Respectfully submitted,

Date: December 23, 2003 By: Carol G. Stovsky

Carol G. Stovsky
Reg. No. 42,171
Standley Law Group LLP
495 Metro Place South, Suite 210
Dublin, Ohio 43017
Tel.: 614-792-5555
Fax: 614-792-5536

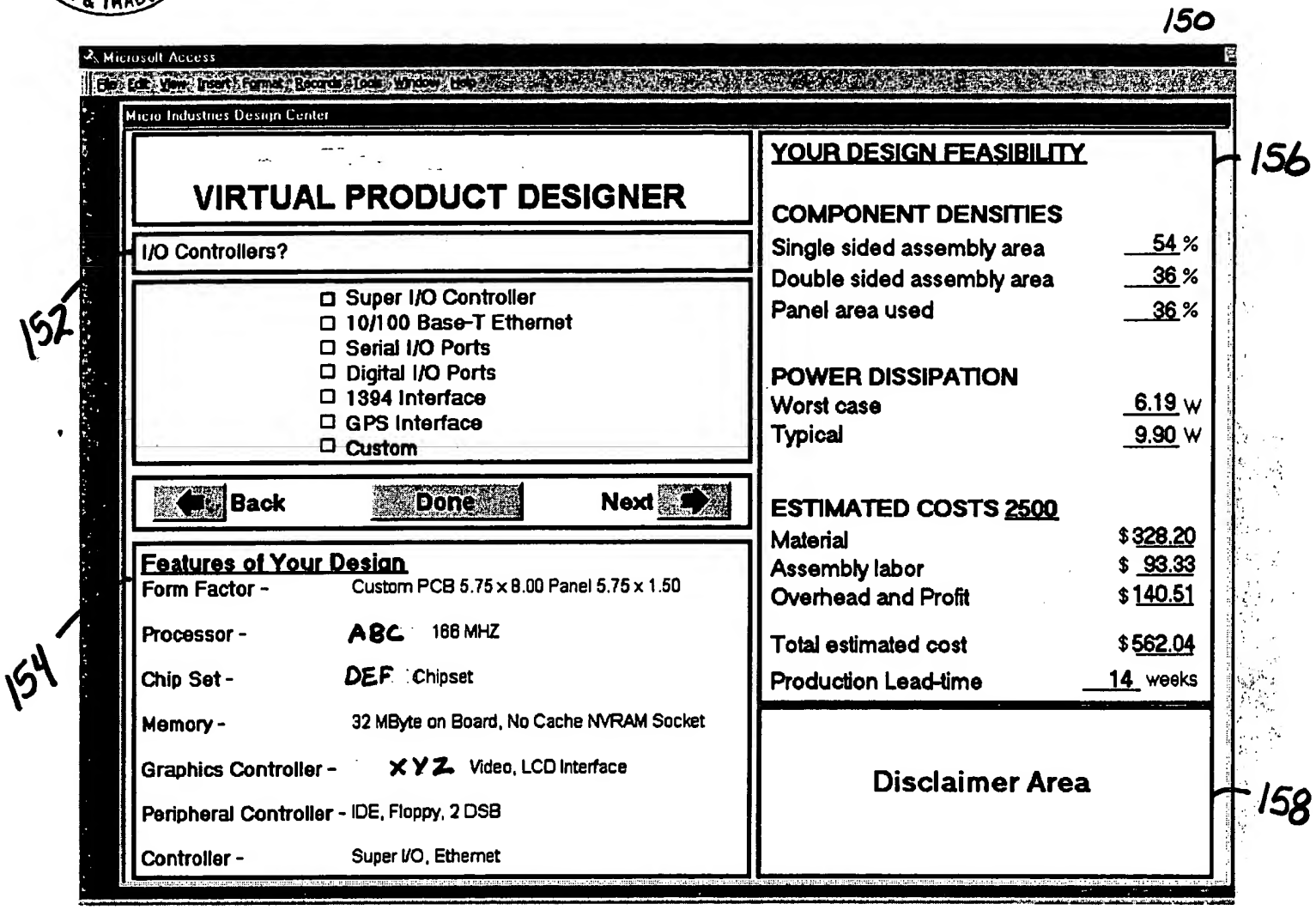

Figure 4

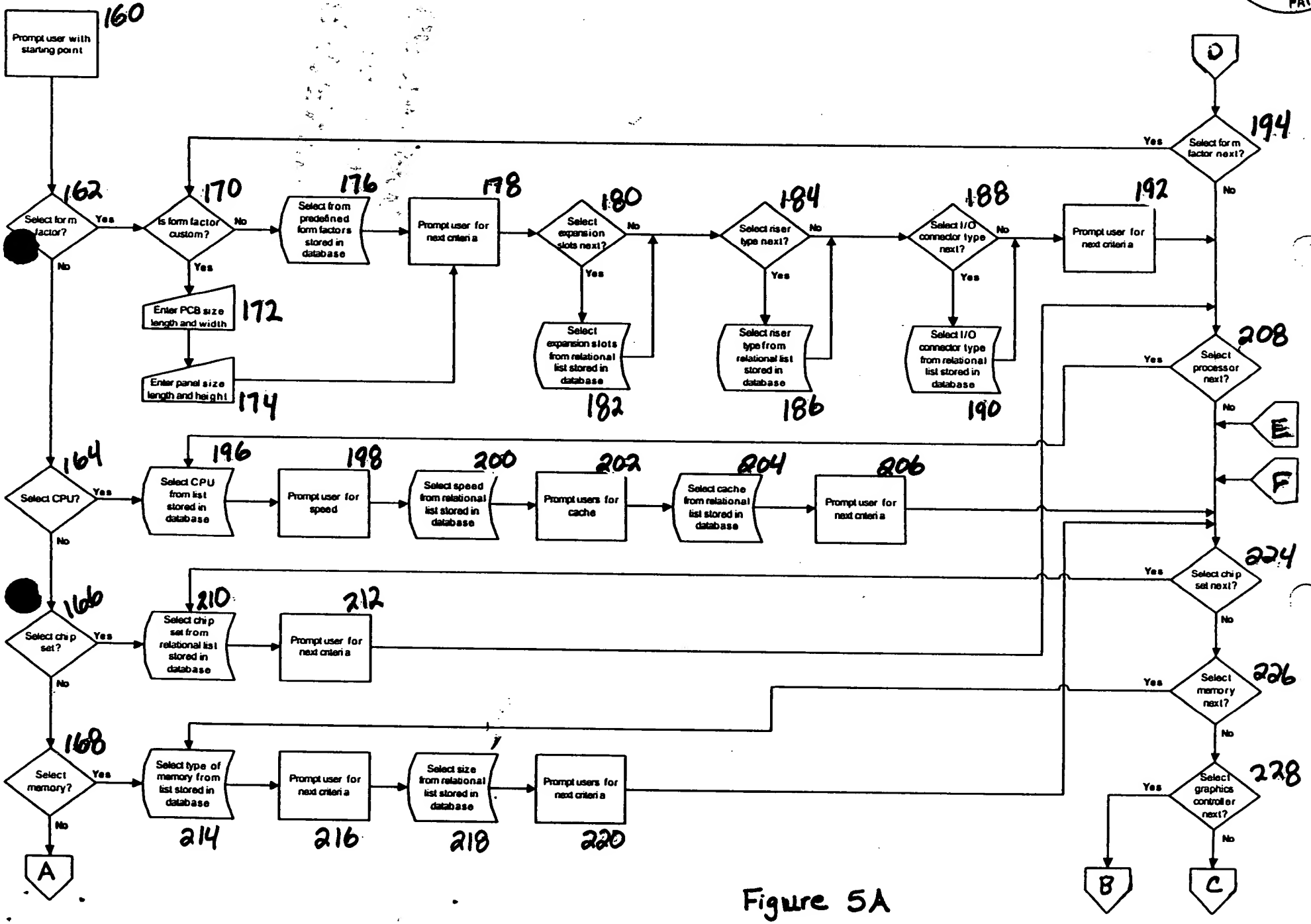

Figure 5A

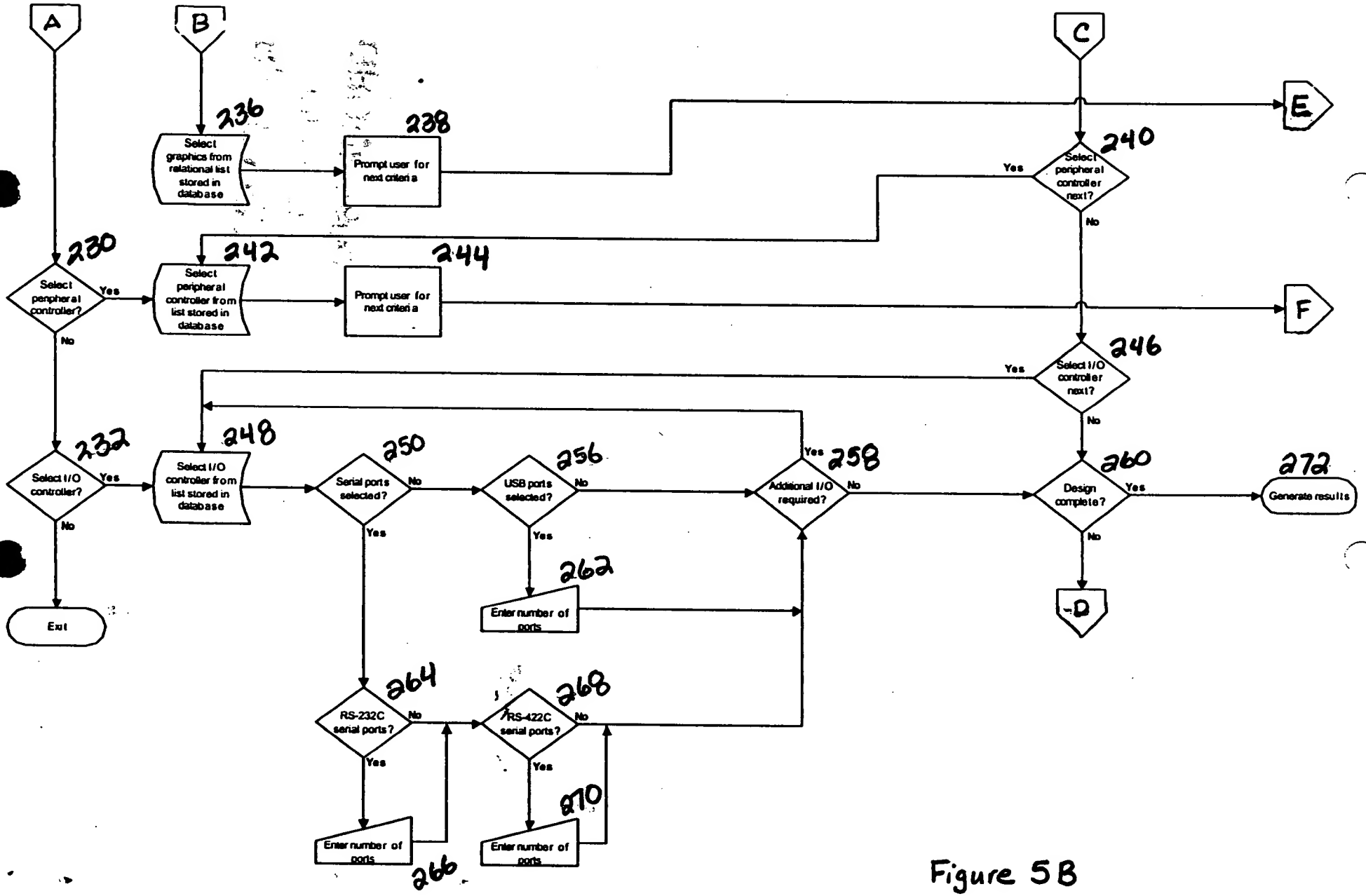

Figure 5B